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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,740	02/17/2006	Takahisa Sato	F-9000	4933
28107 7590 03/21/2007 JORDAN AND HAMBURG LLP 122 EAST 42ND STREET SUITE 4000 NEW YORK, NY 10168			EXAMINER KIKNADZE, IRAKLI	
			ART UNIT 2882	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			03/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/568,740

Applicant(s)

SATO ET AL.

Examiner

Irakli Kiknadze

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 4 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 02/17/2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Newman et al. (US Patent 2002/0067800 A1).

With respect to claim 1, Newman teaches an apparatus (100) for using a sample container (102) through which X-ray, ultraviolet light and visible light are transmissible

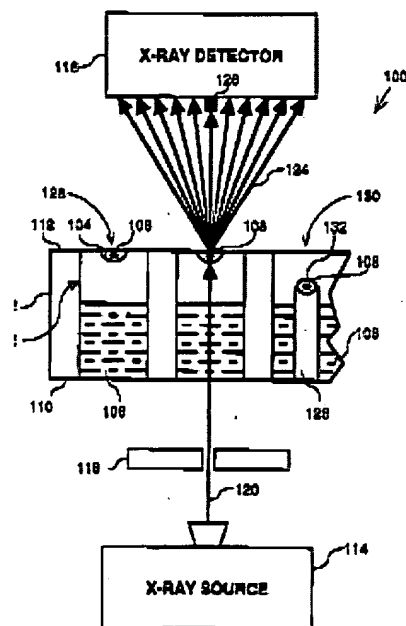


FIG. 1

and evaluating specific macromolecule crystal (108) existing in the sample container is characterized by comprising (Figs. 1

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and 2; see abstract; paragraph 0036 and 0037, lines 1-3):

a sample detecting stage associated with imaging system (202) for detecting the specific macromolecule crystal in the sample container (Fig. 2; paragraph 0054);

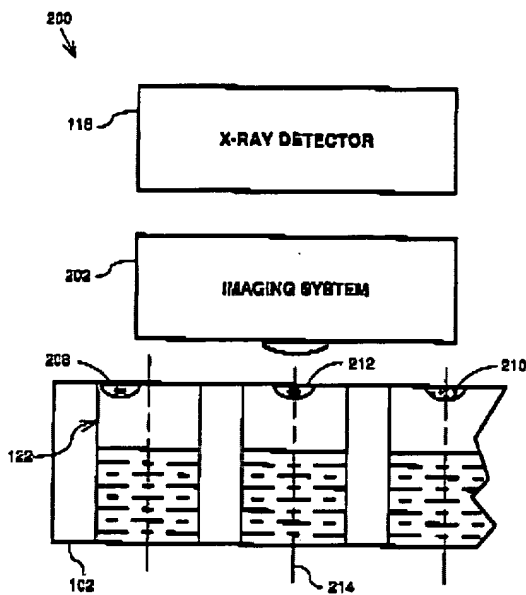


FIG. 2

an X-ray measuring stage (associated with an x-ray source (114) and an x-ray detector (116); see Figs. 1 and 2) that is disposed so as to be spaced from the sample detecting stage and carries out an X-ray diffraction measurement of the specific macromolecule crystal (see paragraphs 0037; 0040; 0046, lines 7-12 and paragraph 0049);

feeding means (300) for feeding the sample container (102) from the sample detecting stage to the X-ray measuring stage (Figs. 3A and 3B; see paragraph 0057); and

control means for recognizing the position of the specific macromolecule crystal on the basis of information achieved in the sample detecting stage and controlling the

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feeding means on the basis of the position information to position the specific macromolecule crystal to a sample disposing portion of the X-ray measuring stage (see paragraph 0058).

With respect to claim 4, Newman teaches That the feeding means comprises a sample table on which a sample container is mounted, an XYZ table for mounting the sample table thereon and moving the sample table in X and Y directions orthogonal to each other on the horizontal plane and in the height direction, and a slider for feeding the XYZ table from the sample detecting stage to the X-ray measuring stage (Figs. 3A, 3B and 5; see paragraphs 0057 and 0060).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Newman et al. (US Patent 2002/0067800 A1) as applied to claim 1 above, and further in view of Van Der AA et al. (US Patent 4,964,150).

With respect to claim 3, Newman teaches that the X-ray measuring stage comprises: X-ray irradiating means (114) for irradiating X-ray from the upper side or

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lower side to the specific macromolecule crystal in the sample container disposed in the sample disposing portion (Fig.1; paragraph 0040); X-ray detecting means (116) that is disposed so as to confront the X-ray irradiating means through the sample container (102), and detects diffracted X-ray from the specific macromolecule crystal transmitted through the sample container (Fig.1; see paragraph 0047, lines 7-12 and paragraph 0049). Further, Newman teaches that positions of the x-ray irradiating means (114) and the x-ray detecting means (116) may be switched (see paragraph 0040, lines 4-8) but fails to teach a rotary arm for supporting the X-ray irradiating means and the X-ray detecting means with an associated driving mechanism.

Van der AA teaches an x-ray examination apparatus comprising a rotary arm (14) with side arms (20) and (22) for supporting an X-ray irradiating means (24) and the X-ray detecting means (26); and a rotationally driving mechanism (associated with a control panel (8) and rotary shaft (10)) for rotating the rotary arm with respect to the substantially horizontal shaft center by any angle (see sole Figure; column 2, lines 41-45 and 51-57) providing user with capabilities to controllably switch the positions of the x-ray irradiating means (24) and the x-ray detecting means (26).

It would be obvious to one of ordinary skill in art at the time the invention was made to use the rotating arm for supporting the X-ray irradiating and detecting means as suggested by Van der AA in the apparatus of Newman, since such a modification would provide user to user with capabilities to controllably switch the positions of the x-ray irradiating means and the x-ray detecting means that would enhance imaging by recording a diffraction pattern from the both sides of crystal.

Allowable Subject Matter

6. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claim 2, prior art fails to teach a specific macromolecule crystal evaluating device, wherein the sample detecting stage comprises specific macromolecule crystal detecting means for irradiating ultraviolet light to the sample container and detecting a fluorescent image emitted from the sample in the sample container; and crystal detecting means for detecting the outline of the sample from a visible light image of the sample existing in the sample container, wherein the control means judges as a specific macromolecule crystal the sample for which the fluorescent image is detected by the specific macromolecule detecting means and the outline showing the crystal is detected by the crystal detecting means, and recognizes the position of the specific macromolecule crystal as claimed including all of the limitations of the base claim.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Oka et al. (US Patent 5,214,288), Subbiah (US Patent 5,353,236)

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and McRee (US Patent 7,144,457 B1) teach the methods and apparatus evaluating specific macromolecule crystals.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irakli Kiknadze whose telephone number is 571-272-2493. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ik/March 15, 2007

A handwritten signature in black ink, reading "Irakli Kiknadze". The signature is fluid and cursive, with the first name "Irakli" and last name "Kiknadze" clearly distinguishable.

Irakli Kiknadze
Patent Examiner